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LISTS OF SPECIES

Fish, Passa Cinco stream, Corumbataí river basin, state of São Paulo, Brazil

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Abstract: The fishes of the present study were collected in Passa Cinco stream, a main river of Corumbataí river basin, Tietê drainage. Five sites were selected in that stream, downstream from headwater to its mouth, and six samplings were performed using the following fishery equipment: a sieve, electric fishery equipment, gill nets and fish-traps. 5082 individuals, 62 species, 18 families and 6 orders were captured. The orders Characiformes and Siluriformes were the most representative and the families Characidae and Loricariidae presented the largest in number of species.

Introduction

The neotropical area presents a great diversity of species of fresh water fish (Lowe-McConnell 1999). South America harbors, approximately, 60 families and about 5.000 species (Vari and Weitzman 1990). Thirty-eight families and 310 fish species were recorded for the upper Paraná river basin in São Paulo state (Langeani et al. 2007).

The Passa Cinco stream is a main river of Corumbataí River basin and also one of the most preserved. Its name is a toponymy for being the fifth river the travelers of the 19th century found in the way from Rio Claro to Ipeúna: Ribeirão Claro, Servidão, Corumbataí, Cabeça and, finally, the Passa Cinco stream.

Material and Methods

This work was accomplished in Passa Cinco stream, a main river of Corumbataí river basin. It presents 525 km^2 of drainage area and its course covers about 60 km, from its headwater in *Serra da Cachoeira,* a component of *Serra de Itaqueri*, located in the city of Itirapina, with altitude of 1000 m; to its mouth in Corumbataí river, with altitude of 480 m. Nowadays, 51.72 % of its surface is occupied by implanted pasture area, 14.13 % by sugarcane plantation, 15.67 % by native forest and 0.74% by scrubland (Valente and Vettorazzi 2002).

Five sites were selected according to the stream orders, using a hydrological map with scale 1:50.000, from the headwater, at order 2, to its mouth, at order 6, with the following geographical coordinates: site 1 (order 2) - 22°23'36" S, 47°53'08" W, site 2 (order 3) - 22°22'10" S, 47°51'22" W, site 3 (order 4) - 22°21'63" S, 47°48'48" W, site 4 (order 5) - 22°24'74" S, 47°43'34" W and site 5 (order 6) - 22°30'97" S, 47°39'49" W.

In May, July, September and November of 2005, January and March of 2006, six samplings were accomplished in each sample site (proc. IBAMA n° 02027.000234/2005-05).

The following fishery equipment were used: a sieve (used on bank vegetation for ten times in each site, except in site 1 due to vegetation absence and low volume of water), electric fishery equipment (used in the sites of smaller order - sites 1, 2 and 3 - in these places, passages of 50 m were determined, and the equipment was placed for a single time without a contention net), gill nets with meshes varying from 3 to 9 cm measured between adjacent knots (which were used in the sites of larger order - sites 3, 4 and 5 - used from afternoon to morning of the following day) and fish-traps (diameter = 20 cm and length = 50 cm; with bate, used in all sites).

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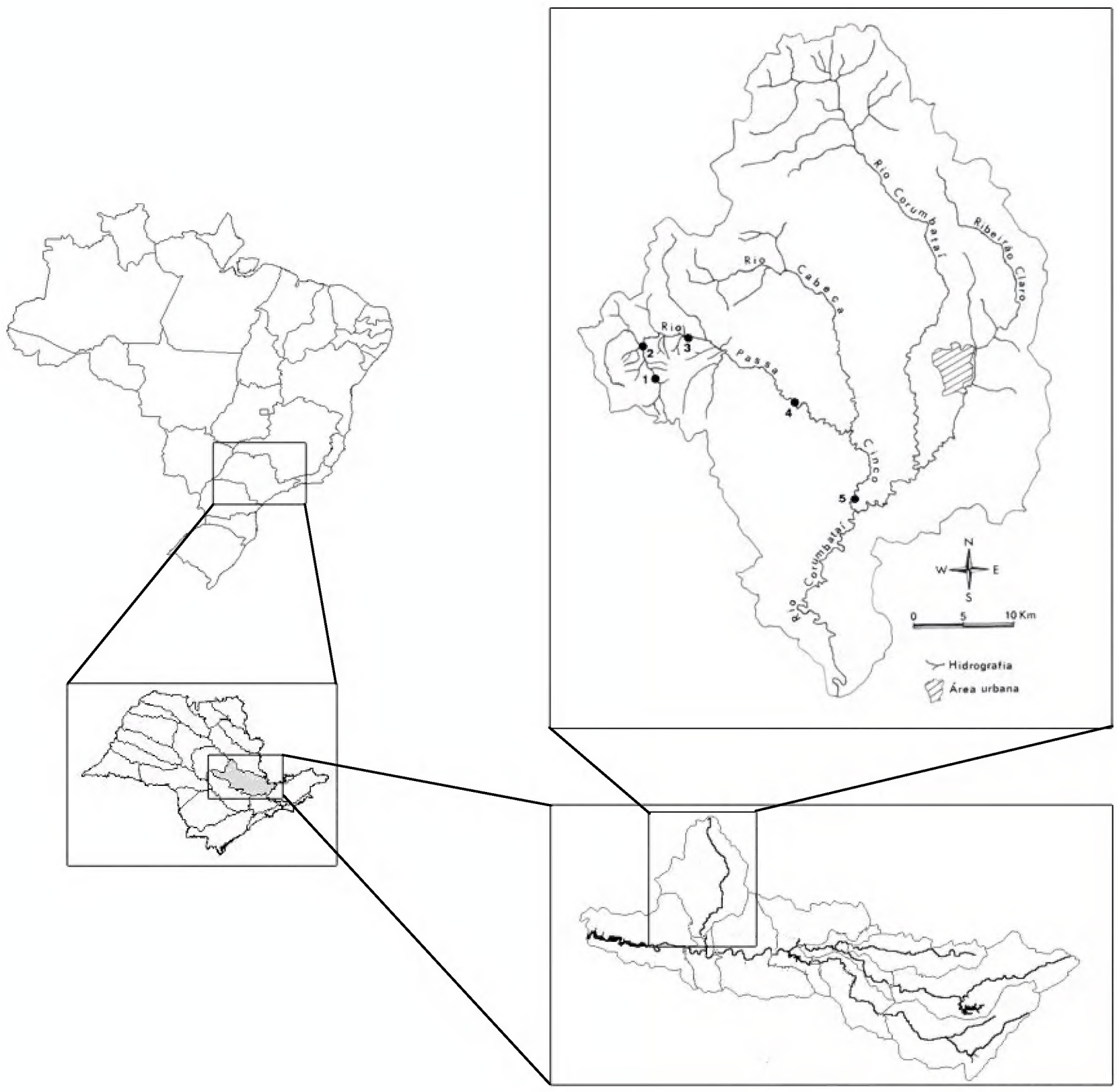

Figure 1. Study area indicating the Corumbataí River basin, showing the sampled sites (modified from Garcia et al., 2004). 1 - Sample site 1; 2 - Sample site 2; 3 - Sample site 3, 4 - Sample site 4; and 5 - Sample site 5.

All samplings were immediately stored in plastic bags with 10 % formaline and, after 48 hours, transferred to alcohol 70 % solution. The fish species were identified by experts on fish group.

Voucher specimens were deposited in the ichthyological collection of the ichthyology laboratory of *Universidade Estadual Paulista*, in Rio Claro. The taxonomic classification system used followed Reis et al. (2003).

Results and Discussion

We captured 5082 individuals, distributed into 62 species, 18 families and 6 orders (Table 1). The orders Characiformes and Siluriformes were the most representative ones, corresponding to 48 % and 41 % of the species, respectively, which reflects the pattern found for South American ichthyofauna (Schaefer 1998) and the upper Paraná River basin (Castro and Menezes 1998). Cyprinodontiformes, Gymnotiformes and

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Perciformes contributed, each one, with 3% of the species and Synbranchiformes with 2 %.

The families Characidae and Loricariidae presented the largest number of species, contributing, together, with around 44 % of the captured species. The high contribution of species belonging to these families is common in several other studies (Garutti 1988; Uieda and Barreto 1999; Casatti et al. 2001; Castro et al. 2003; Súarez and Petrere 2005; Gomiero and Braga 2006a).

The captures of 61 species of fish in Passa Cinco stream reflect the richness of that system. Gerhard (unpublished data), sampling streams in Corumbataí river basin with electric fishery equipment, captured 51 species of fish from a total of 53.806 individuals. Fragoso (unpublished data), studying the Passa Cinco stream sub-basin, making uses of sieves, fishing-net, fish-traps and nets, captured 52 species, 48 of them in the main course. Other studies in which nets and/or sieves and fish-traps have been used in Passa Cinco stream can also be mentioned: Gomiero and Braga (2006b) and Cetra and Petrere (2006) that captured 28 and 27 fish species respectively.

Only nine species of fish that were caught in previous studies were not sampled in this study: *Schizodon nasutus* (Cetra and Petrere 2006; Fragoso unpublished data), *Serrapinus notomelas* (Cetra and Petrere 2006), *Triportheus angulatus* (Cetra and Petrere 2006), *Steindachnerina insculpita* (Gomiero and Braga 2006; Fragoso, unpublished data), *Hypostomus albupunctatus* (Gomiero and Braga 2006), *Hypostomus regani* (Gomiero and Braga 2006), *Serrapinus heterodon* (Gomiero and Braga 2006; Fragoso 2005), *Leporinus obtusidens* (Gomiero and Braga 2006), *Tilapia rendalli* (Fragoso, unpublished data).

Table 1. Taxonomic list of the species captured in the Passa Cinco stream, based on Reis et al. (2003), with distribution of species of fish in each sample site (1- Sample site 1; 2 - Sample site 2; 3 - Sample site 3, 4 - Sample site 4; and 5 - Sample site 5).

	Sample Sites				
	1	**2**	**3**	**4**	**5**
Superorder Ostariophysi					
Order Characiformes					
Family Parodontidae					
Apareiodon affinis (Steindachner, 1879)			X	X	X
Apareiodon ibitiensis Campos, 1944	X	X	X		
Parodon nasus Kner, 1859		X	X	X	X
Family Curimatidae					
Cyphocarax modestus (Fernández-Yépez, 1948)					X
Cyphocarax vanderi (Britski, 1980)	X				
Steindachnerina insculpta (Fernández-Yépez, 1948)			X	X	X
Family Prochilodontidae					
Prochilodus lineatus (Valenciennes, 1836)			X		
Family Anostomidae					
Leporellus vittatus (Valenciennes, 1850)			X		
Leporinus friderici (Bloch, 1794)			X		X
Leporinus octofasciatus Steindachner, 1915					X
Leporinus striatus Kner, 1858					X

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	Sample Sites				
	1	**2**	**3**	**4**	**5**
Family Crenuchidae					
Characidium gomesi Travassos, 1956			X		
Characidium aff. *zebra* Eigenmann, 1909	X	X	X	X	X
Family Characidae					
Genera Incertae Sedis					
Astyanax altiparanae Garutti & Britskii, 2000	X	X	X	X	X
Astyanax bockmanni Vari & Castro 2007	X	X	X	X	X
Astyanax fasciatus (Cuvier, 1819)			X	X	
Astyanax scabripinnis paranae Eigenmann, 1914	X	X	X		
Astyanax sp.	X	X	X	X	X
Bryconamericus stramineus Eigenmann, 1908	X	X	X	X	X
Bryconamericus turiuba Langeani, Lucena, Pedrini & Tarelho-Pereira, 2005	X	X	X		
Bryconamericus sp.				X	X
Hyphessobrycon eques (Steindachner, 1882)			X		
Hyphessobrycon sp.					X
Piabina argentea Reinhardt, 1867		X	X		
Subfamily Serrassalminae					
Serrassalmus maculatus Kner, 1858					X
Subfamily Aphyocharacinae					
Aphyocarax dentatus Eigenmann & Kennedy, 1903				X	
Subfamily Cheirodontinae					
Odontostilbe aff. *microcephala* Eigenmann, 1907	X	X	X	X	X
Subfamily Glandulocaudinae					
Planaltina britski Menezes, Weitzman & Burns, 2003					X
Family Erythrinidae					
Hoplias cf. *malabaricus* (Bloch, 1794)				X	X
Order Siluriformes					
Family Cetopsidae					
Cetopsis gobioides Kner, 1858		X	X		
Family Trichomycteridae					
Trichomycterus sp.1	X	X	X		
Trichomycterus sp.2					X
Family Callichthyidae					
Corydoras aeneus (Gill, 1858)			X		X
Corydoras flaveolus Ihering, 1911		X	X	X	X
Hoplosternum littorale (Hancock, 1828)					X
Family Loricariidae					
Subfamily Neoplecostominae					
Neoplecostomus sp.	X		X		
Subfamily Hypoptopomatinae					
Corumbataia cuestae Britski, 1997	X	X	X	X	
Hisonotus insperatus Britski & Garavello, 2003				X	
Hisonotus sp.			X	X	

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	1	**2**	**3**	**4**	**5**
Subfamily Loricariinae					
Loricaria cf. *piracicabae* Ihering, 1907					X
Rineloricaria latirostis (Boulenger, 1900)	X	X	X	X	X
Subfamily Hypostominae					
Hypostomus ancistroides (Ihering, 1911)	X	X	X	X	X
Hypostomus cf. *hermanni* (Ihering, 1905)			X		
Hypostomus strigaticeps (Regan, 1908)	X	X	X	X	X
Hypostomus sp.1	X	X	X	X	X
Hypostomus sp.2				X	X
Hypostomus sp.3			X		
Family Pseudopimelodidae					
Microglanis sp.			X		
Family Heptapteridae					
Cetopsorhamdia iheringi Schubart & Gomes, 1959	X	X	X	X	
Imparfinis borodini Mees & Cala, 1989	X	X	X		
Imparfinis mirini Hasemann, 1911	X	X	X	X	X
Imparfinis schubarti (Gomes, 1956)			X	X	
Pimelodella sp.			X		X
Rhamdia quelen (Quoy & Gaimard, 1824)	X	X	X	X	X
Order Gymnotiformes **Family Gymnotidae**					
Gymnotus cf. *carapo* Linnaeus, 1758			X		
Family Sternopygidae					
Eigenmannia virescens (Valenciennes, 1836)		X		X	
Order Cyprinodontiformes **Family Poeciliidae**					
Phalloceros caudimaculatus Hensel, 1868	X	X	X		X
Poecilia reticulata Peters, 1859			X	X	
Order Synbranchiformes **Family Synbranchidae**					
Synbranchus marmoratus Bloch, 1795					X
Order Perciformes **Family Cichlidae**					
Crenicichla jaguarensis Haseman, 1911					X
Geophagus brasiliensis (Quoy & Gaimard, 1824)	X	X	X	X	

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